

1887.

ANNUAL REPORT
ON THE HEALTH
OF THE
RURAL SANITARY DISTRICT
OF THE
ISLE OF WIGHT.


BY

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Isle of Wight,

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ANNUAL REPORT

ON THE

HEALTH OF THE RURAL SANITARY DISTRICT OF THE ISLE OF WIGHT, For the Year 1887.

*To the Members of the Isle of Wight Rural Sanitary
Authority.*

GENTLEMEN,

I have arranged my Annual Report on the Health of your District for the year 1887, which I have the honour to submit to you, under the following heads—

1. Vital Statistics.
2. The Sanitary History of the Year.
3. The Sanitary State of the District generally at the end of the Year.

I. VITAL STATISTICS.

The *natural* increase of the population of the Isle of Wight Rural Sanitary District during the year 1887, measured by excess of births over deaths, was 347. The actual population in the middle of the year estimated on the hypothesis that the rate of increase which prevailed during the last intercensal period (1871-81) has been maintained, was 28,304. The estimated increase being 304 less than the natural increase of population. Of these 28,304 persons it is estimated 14,730 were males and 13,574 were females. Containing as it does 87,599 acres the District has a population of 3'09 to the acre.

The births registered in 1887 numbered 798. The male births numbered 429, and the female births numbered 369. The deaths registered in 1887 numbered 451. The male deaths numbered 260, and the female deaths numbered 191.

In each quarter the births and deaths were as follows—

	Births.			Deaths.		
	M.	F.	Total.	M.	F.	Total.
1st quarter	88	95	183	69	55	124
2nd „	95	80	175	72	41	113
3rd „	139	104	243	46	42	88
4th „	107	90	197	73	53	126
	429	369	798	260	191	451

Birth-rate and
Death-rate.

If the number of the population as estimated be correct the birth rate in 1887 was equal to 28·1, and the death rate was equal to 15·9 per 1000. 44 persons died within the District who did not belong to it, and deducting these deaths the death rate was equal to 14·3 per 1000. There is no means of estimating the number of deaths of persons belonging to the District who died beyond it, but it would probably be considerably below the number of deaths of strangers who died within the District, as the salubrity of the climate attracts so many here who are in advanced stages of disease when they arrive.

Births and Deaths
in five years.

The births and deaths in your District during the past five-years have been as follows—

	Births.	Birth-rate.	Deaths:	Death-rate.
1883	776	27·5	429	15·2
1884	834	29·6	386	13·7
1885	769	27·2	439	15·4
1886	861	30·4	445	15·7
1887	798	28·1	451	15·9

Birth-rate and
Death-rate, in
England and
Wales.

The birth rate in England and Wales in 1887 was 31·4 and the death-rate 18·8 per 1000 of the estimated population in the middle of the year. The birth-rate in England and Wales was lower than in any previous year since 1838, when birth registration was, undoubtedly, defective, and was 2·6 below the mean annual rate in the ten years 1877-86. The death-rate in England and Wales, which has been gradually declining, was lower in 1887 than in any year since the commencement of civil registration in 1837, just fifty years ago. This marked and continued reduction in the death-rate, which has been due, doubtless, in great measure to improvements in the habits of the people, but which has been to a far greater extent the outcome of sanitary legislation, and the former in no small degree has been the outcome of the latter—implies that more than 400,000 persons in England and Wales were alive at the close of the seventh year of the current decennium whose deaths would have been recorded therein had the mean rate of mortality equalled that which prevailed during the ten years 1871-80. The mean death-rate for the six years 1880-86 of the population resident outside the boundaries of Urban Sanitary Districts was equal to 17·6 per 1000, and the actual extra urban death-rate for 1887 to 17·2 per 1000.

Comparison of
the birth-rates
and death-rates
in the I.W. with
those of England
and Wales.

The birth-rate in the Isle of Wight Rural Sanitary District in 1887 was 3·3 below the birth-rate of England and Wales, and the death-rate was 2·9 below the average death-rate, or deducting the deaths which occurred among persons not belonging to the District, 4·5 below the average. On comparison with that of the populations

of England and Wales residing beyond the Urban Sanitary areas we find the death-rate was 1·3 below the average, or deducting the deaths of visitors, 2·9 below the average. As compared with the average death-rate in England and Wales, and with that of small towns and country parishes the death-rate of the Isle of Wight Rural Sanitary District during the last five years was as follows—

Below the average of England
and Wales. of Rural Districts.

1883	...	4·3	...	2·5
1884	...	5·9	...	3·7
1885	...	3·6	...	2·1
1886	...	3·6	...	2·1
1887	...	2·9	...	1·3

The death-rate of males at all ages was 17·7, and of females 14·0 per 1000.

The 451 deaths in 1887 included those of 70 infants Infant mortality under one year of age. The rate of infant mortality measured by the proportion of deaths under one year to registered births, was equal to 87 per 1000 against 73 and 89 in the two preceding years. The corresponding rate for England and Wales in 1887 was 145 per 1000. 104 children, or 23 per cent. of the deaths died under five years. 161 persons, or 35·6 per cent. of the deaths, died at or over 60, of whom 51 were between 60 and 70, 71 between 70 and 80, 35 between 80 and 90, and 4 were over 90. The age of the widow of a laborer of Shalfleet, who died in the Workhouse, was 97, which was the greatest age registered among the deaths. Mortality of the aged.

44 persons died in the District who did not belong to it. 24 of these died in the Workhouse, 16 in the Hospital for Consumption at St. Lawrence, an infant, the daughter of a visitor, at Brading, and three bodies were washed ashore from the Wreck off Shanklin of the Pilot boat, "Pride of the Sea."

20 persons died a violent deaths—4 were run over, 1 fell from an omnibus, 2 infants died from want of nourishment and exposure, 1 was knocked down by a pony cart, 1 was buried in a gravel pit, 1 was suffocated at a fire, 4 committed suicide, (3 by hanging, and 1 by cutting her throat), and 6 were drowned, the three sailors whose bodies were washed ashore, one young man who was drowned while bathing, and another who fell out of a canoe, and a lady who was overtaken by the sea at Blackgang, while walking on the shore. 16 of these were males, and three females, two of whom committed suicide (one, who was 16. by hanging, and the other, who was 66, by cutting her throat), and one was accidentally drowned. The deaths from violence showed an increase upon the numbers in Deaths by violence.

recent years, and in this respect they corresponded with the experience of the country generally. They were equal to 4·4 per cent, of the deaths from all causes, and to a rate of 0·71 per 1000 of the population. The corresponding rates for England and Wales were 3·3 per cent. and 0·63 per 1000. The percentage of deaths from violence during the past five years was as follows—

	1883	1884	1885	1886	1886
	3·0	2·5	3·4	3·3	4·2
Mortality from certain diseases.	The 451 deaths from all causes included—				
Zymotic Diseases.	3 attributed to scarlatina				
	12	„	diphtheria		
	2	„	whooping cough		
	2	„	fever		
	7	„	diarrhœa		
	<hr/>				
	25				

The 25 deaths attributed to these principal zymotic diseases were equal to a death-rate of 0·88 per 1000, and were 5·5 per cent. of the deaths from all causes. The mean annual death-rate from these diseases in England and Wales, which had been 4·15 and 3·40 per 1000 respectively in the two decennial periods 1861-70 and 1871-80, did not exceed 2·42 in the first seven years of the current decennium 1881-90. The death-rate from diphtheria for your District generally was 0·42 as against 0·49 in 1886. In portions of it the death-rate from diphtheria was as high as 3·4. The death-rate from diphtheria in England and Wales in 1886 and 1887 was 0·15.

Phthisis.

71 deaths from consumption were registered in your District in 1887. Of these 15 deaths occurred in the Consumption Hospital among those who were strangers in the Isle of Wight, and three in the Workhouse who belonged to the Island but not to your District. The death-rate from phthisis was 2·3 per 1000, or deducting the death of 18 persons who did not belong to the District of 1·8 per 1000. The percentage of deaths of Isle of Wight people from phthisis to all the deaths among residents was 13·0 in 1887.

The mean percentage of deaths from phthisis to all the deaths in England and Wales for the ten years 1877-86 was 9·4.

Lung diseases.

72 persons died from other forms of lung disease, one of whom did not belong to the District, which would be equivalent to a death-rate of 2·5 per 1000, the mean death-rate for England and Wales being 3·3 per 1000.

Heart Disease.

Heart disease killed 27 persons, of whom two did not belong to the District. The death-rate from heart disease therefore, was 0·9 per 1000, or deducting the two deaths

referred to, of 0·8 per 1000. The mean death-rate from heart disease in England and Wales 1·3 per 1000.

14 persons died from cancer, of whom one did not belong to the District, consequently 3·1 per cent. of all the deaths of residents were due to cancer. 2·6 was the mean percentage of deaths from cancer to all the deaths in England and Wales for the years 1877-86. Cancer.

10 deaths—2·2 per cent of the deaths—occurred from scrofula or tuberculosis. The deaths from scrofulous diseases in England and Wales from 1877-86 were 3·7 per cent. of the deaths from all causes. Scrofula.

The gradually increasing death-rate of your District during the past three or four years, though very small, is admonitory. It has been mainly due, probably, to the epidemic of diphtheria which in its passage across the Isle of Wight has found a resting place in localities favorable to it, and has been particularly fatal in them. Increasing death-rate

I have previously pointed out to you that deaths from cancer form a much larger proportion of the deaths from all causes in your District than in the country generally. Although I have not the figures before me I believe it is a fact that insanity is more prevalent in the Isle of Wight than in England and Wales taken as a whole. Phthisis is another disease the deaths from which are in excess. In all probability there are, common to all, underlying causes of degeneration which determine the prevalence of these diseases. As regards consumption, its prevalence is no doubt partly due to phthisical families having settled here in the past as they do now, but many of the deaths from phthisis, as of cancer, are registered under old Isle of Wight names. The diet and habits of the people during former periods may have had an influence; and when the population was much smaller and communication with the mainland difficult, as during the last century and the beginning of this one, marriages of consanguinity were frequent. But I believe the prevalence of phthisis, at least, may be attributed in some measure to defective sanitation, and more especially to the fact that so many of the houses, both old and new, are ill ventilated and damp, and this not only from little care having been taken in the selection of sites but because their construction is essentially bad.

(A) Table of deaths during the Year 1887, in the Rural Sanitary District of
and showing also the Population of such Localities

Names of Localities adopted for the pur- pose of these Statis- tics; public institu- tions being shown as separate localities.	POPULATION AT ALL AGES.		Registered Births.	MORTALITY FROM ALL CAUSES AT SUBJOINED AGES.								Small-pox.
	Census 1881	Estimated to middle of 1887		At all ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 60.	60 and upwards.		
1	2	3	4	5	6	7	8	9	10	11	12	13
NEWPORT			184	61	14	2	3	4	16	22	Under 5. 5 upwds.	.....
WORKHOUSE	405			52	1	2	2	1	11	35	Under 5. 5 upwds.	.....
PARKHURST PRISON	1159			11					11		Under 5. 5 upwds.	.....
PARKHURST BARRACKS	618			5	1	1	1	2			Under 5. 5 upwds.	.....
COWES			66	22	7	2		2	8	3	Under 5. 5 upwds.	.....
RYDE			202	95	13	8	3	3	33	35	Under 5. 5 upwds.	.....
GODSHILL			163	84	18	8	5	7	17	29	Under 5. 5 upwds.	.....
ROYAL NATIONAL HOSPITAL FOR CONSUMPTION.	126			19				4	15		Under 5. 5 upwds.	.....
CALBOURNE			183	102	16	11	7	11	20	37	Under 5. 5 upwds.	.....
TOTALS	28008	28304	798	451	70	34	21	34	131	161	Under 5. 5 upwds.	.....
The subjoined numbers have also to be taken into account in judging of												
Deaths occurring outside the division or district among persons belonging thereto.				.....	.....	.....	.....	.....	.....	.....	Under 5. 5 upwds.	.....
Deaths occurring within the division or district among persons not belonging thereto				.....	2	.....	1	3	22	16	Under 5. 5 upwds.	.....

SLE OF WIGHT, Classified according to DISEASES, AGES, and LOCALITIES,
Births therein during the Year.

MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE
YEARS OF AGE.

Scarlatina.	Diphtheria.	Croup, (not "spasmodic")	Whooping Cough.	Cont. Fevers.			Diarrhoea and Dysentery.	Cholera.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	Ague.	Phthisis.	Bronchitis, Pneu- monia, & Pleurisy	Heart Disease.	Injuries.	All other Diseases.
15	16	17	18	Typhus.	Enteric or Typhoid.	Other or doubtful.	22	23	24	25	26	27	28	29	30	31	32	33
							2								8		1	5
					2							1		3	10	5	3	21
															1			2
					1									5	3	3		37
														3	3			5
1																		1
		1			2													
			1												3			5
											1			4	2	1	1	4
1	1	1	1				1								5			11
							1			1	2			11	9	11	7	32
	1	1												1	6			17
										1				14	10	4	2	27
														17				2
	3						2							1	5		1	14
	7						1					1		12	7	3	6	38
2	5	2	2				5							2	28		2	55
	7	1			5		2			2	3	2		69	44	27	19	166

Mortality of this Division of the Sanitary District.

							1											1
					1									18	1	2	3	17

2. THE SANITARY HISTORY OF THE YEAR.

The sanitary history of the year is the history of the preventable disease of the year and of the action taken to check its spread when present, and of the measures adopted to guard against it in the future ; it is also an account of circumstances and conditions which have had a bearing on the public health during the year.

Preventable
diseases.

In one sense most diseases are preventable, inasmuch as they are consequent upon want of accord between the environment of the individual, his habits, his occupation, his food, and the laws of his being, and upon tendencies received by heredity, which have been the result of similar want of accord between the lives of his predecessors and the laws of existence. But the term is usually applied to those diseases the nature and causation of which are better known, and the origin and spread of which are more or less under the control of sanitary authorities. Of these diseases small-pox, scarlet fever, measles, whooping cough, diarrhœa, enteric fever, and diphtheria were present in your District during 1887.

Zymotic
diseases.

Small-pox.

A case of small-pox occurred at Wootton at the end of March. E.J., 33, a carpenter, had premonitory symptoms on March 24th, and was placed on his club. On March 30th the rash began to appear. My attention was called to the case by the medical man in attendance, who is the medical officer of health of Ryde and St. Helens. As it was necessary to act promptly, and as there was no isolation hospital to which to send him, I had to adopt one of two courses, I had either to place his wife and children in quarantine in an empty cottage, if one could be found, and obtain two trained nurses for the patient, or get the Relieving Officer's order and remove him to the Poor Law isolation hospital. I chose the latter alternative as involving the least loss of time and expense. When the rash appeared the children were vaccinated, a very proper precautionary measure. On April 4th I found two of them in bed with temperatures over 102° F. Concluding they were about to develop small-pox, I obtained another order, and removed the whole family to the hospital on April 5th. Without communication with me, they were sent home, before the house was cleansed, on April 13th, after having been in quarantine only eight days. I regret the view should have been taken that the opinion of the Medical Officer of Health in the matter was not necessary. The patient was discharged on May 2nd, thirty-three days after the rash appeared. I believe no bad results followed this ill-considered course because the inhabitants of Wootton having been warned, effectually isolated the family. I may say the origin of

the poison in this case was not traced. Small-pox was epidemic in Portsmouth at the time. The man journeyed to Ryde and Newport by train. He visited the house of a wardrobe dealer at Ryde, and sometimes obtained second-hand clothes from him. I believe disease is more frequently spread in connection with wardrobe dealing than is generally supposed. The clothes of a person who died of scarlet fever, sold to a wardrobe dealer, were innocently distributed by him along with the poison of that disease.

A child died from scarlet fever at Parkhurst Barracks, and another from albuminuria following scarlet fever at Haylands, but the origin of the disease in these cases was not known. An isolated case, that of a girl who was in service in the village, occurred at Wootton in April. She had visited Newport and Ryde during a holiday 18 days before the rash appeared, but had not come into contact with any person suffering from scarlet fever. The disease was wide-spread at Wootton in 1884, and this girl's may have been one of those cases of infection after long intervals from clothes or other articles, which prove the importance of thorough disinfection after scarlet fever. Another isolated case occurred in a Coastguardsman's family at Newtown in August. A child, convalescent from some disease had recently come to a neighbouring cottage from Plymouth, where scarlet fever prevailed. As the children may have come into contact it is possible the poison was conveyed in this manner. There were several cases in November and December at Bonchurch, Steephill Cove, Upper Ventnor, and Lowtherville, the the first cases having been introduced from Ventnor, to which the disease had come from London, where it was raging. The disease did not spread in this part of your District in 1887 after it was brought to my notice, a fact which I attribute to the efficacy of the precautions taken. In December a servant was sent by her mistress in a cab from Ventnor to a crowded home in Whitwell, without telling her or giving notice to her friends that she was suffering from scarlet fever. As this was in contravention of sec. 126, p. 2, P.H.A., 1875, it is unfortunate your Authority did not see your way clear to take action in the matter. The disease was communicated to another member of the family, and, probably, at a later period to a child at Southford. That it did not spread farther was most likely due to the watchfulness and assistance of a member of your Authority, the Vicar of Whitwell. In the autumn and winter scarlet fever was widespread at Yarmouth, a large number of cases having occurred there. I was unable to trace the disease to its origin, but there

Scarlet Fever.

was reason to believe it may have been introduced from London. There was a case at Brooke in December, a lad having come home from the training ship, "Worcester," on board which there were several cases. As soon as the disease was recognised the patient was effectually isolated, and it did not spread. There were also two isolated cases in the Freshwater District, one at Norton Green and the other at Pound Green, but no clue to the origin of the disease could be obtained in either case.

Measles.

There were a large number of cases of, but no death from measles in your District in 1887. It was introduced from Cowes into Gurnard in the summer, and from thence it spread to Northwood, and across the north-west of the Island to Ningwood and Wellow. Nearly every child was affected in the Porchfield district, and the School at Lock's Green was closed. It passed over the Downs to Brooke, and the Managers by my advice closed the Hulverstone School. In December the Shalfleet policeman, who was recovering from measles, visited the police station at Yarmouth, and a fortnight later the family of the sergeant of police were down with measles. Another case, that of a girl who slept with a sister home from a school at Cowes where she had measles, occurred in Yarmouth, but the disease did not spread there. It was introduced directly from Cowes into Wootton, where the Schools were closed. It was also introduced into Sandown directly from Cowes, and from there it spread to Lake in your District, and on to Alverstone and Newchurch.

Whooping-cough.

There were two deaths from whooping-cough in your District registered, but there were two deaths registered from bronchitis which certainly occurred from whooping-cough. The disease was introduced into Gurnard from Cowes, and I saw patients at Whippingham who were infected by those who had taken the disease from Gurnard children. There were cases at Haylands, but I could not discover its source there. There were also cases at Brading, where a child died from inflammation of the lungs following whooping-cough.

Diarrhœa.

There were seven deaths—five children and two adults—registered as occurring from diarrhœa. So far as I could judge three of the children died from improper feeding, and two from diarrhœa associated with teething. One of the adults was a delicate married woman at Brading, who died after five day's illness in August, from what was apparently ordinary summer diarrhœa. The other adult died at Brooke, but in this case the diarrhœa was probably a symptom of organic disease.

Enteric fever.

At the end of 1886 a death from pneumonia was registered as having occurred at Moor farm, Godshell, but

the symptoms during life were those of enteric fever with pneumonia as a complication. A week or ten days after the patient died, his son and daughter, aged respectively 18 and 20, were taken ill with enteric fever. They died in January. In February the mother had the disease and recovered. These people lived in a damp thatched house which overlooked an undrained farm-yard impassable from liquid filth, they drank water from a polluted dip well, and the privy they used, which was common to four families, was abominably foul. There were three other families, one of them a large one, living under precisely the same conditions in adjoining tenements, but it took your Authority six months to get another well sunk for these poor people. In January there was a young man lying ill from enteric fever at Pagham cottage near Rookley, the sanitary state of which was fairly good. The origin of the disease in this case could not be traced. A man working on the railway, who drank from the Shalfleet stream, had enteric fever at Newbridge in June. In the summer there were several cases of enteric fever among the soldiers at Parkhurst from drinking polluted water in barracks. Two of these died, one in May, the other in September. In July a prison warder residing at Horsebridge hill, had enteric fever. It was uncertain if he contracted the disease at the Prison, where from time to time there have been several cases of enteric fever. At the house where he lived there was a stinking slop drain, and a horribly offensive midden privy. The soak-well which supplied the house, and into which the rain-water from the roof was turned; was dry at the time. There was, also, in July a case of enteric fever at Wroxall. The street gutter in front of the house was foul with slops and fœcal matter, and was very offensive at the time, and there was a great stench from pigs kept in the neighbourhood, but the source of the poison could not be satisfactorily traced, and the only water the patient drank was subsequently proved to be pure. A girl died from enteric fever in the Workhouse in July, but the disease was contracted in Newport. In October a child had enteric fever in one of the new jerry-built cottages at Clatterford, Carisbrooke. The cess-pit ventilated into the house through the scullery drain. At the end of December a man was ill at Shalfleet from what afterwards proved to be enteric fever. He drank water from the stream. I have since ascertained there was a case of enteric fever in December in one of two thatched cottages at Thorncross, Brighstone, the water supply of which is derived from the polluted Shorwell stream. There have been five other cases and two deaths in this family.

There were a large number of cases of diphtheria—many Diphtheria.

more than 50 cases, and 10 deaths at Freshwater alone—in your District in 1887. In the early part of the year there were cases of diphtheria in Ryde, and in the Rural District around there were many cases of throat affections. In February there was a distinct case of diphtheria, the origin of which was not clear, at the Longford Institute, Haven street. In April there was a case at Brooke in a damp farmhouse. The mother of the child, who had visited infected houses in Freshwater, had previously suffered from some throat affection. In May there were other cases, one of whom died, at Brooke, in a damp thatched cottage, the water supply and domestic arrangements of which were bad. As I have so recently detailed to you at length in a special report drawn up at the request of the Local Government Board, the whole course and circumstances of the epidemic at Freshwater in 1887, I need not refer to the subject further than to say the majority of the cases occurred in the School Green District, which may be taken to include Pound Green, Middleton, New Village, Victoria Road, Stroud, School Green, New Road, High Street, and Heathfield. The bulk of the other cases occurred at Norton Green. There were isolated cases elsewhere, as at Totland, but virtually, so far as my knowledge extends, the epidemic was confined to those two districts. Judging from what I have seen in other places during the course of diphtheria through your District, I should attribute this to the fact that the subsoil of these areas is of clay, the Osborne Clay being at the surface there. Damp is undoubtedly a factor in the developement of the diphtheritic poison, and in School Green and Norton Green and their neighbourhoods, you have a damp surface and also noisome exhalations poisoning the atmosphere from filth which will not soak away. So the persons affected had in common not only a given district, but they lived for the most part under sanitary conditions more or less unsatisfactory: they either drank bad water, or they were subject to breathe an atmosphere polluted by the exhalations from filth. In many cases there was another element in common, namely that they attended the Parochial Schools. My investigations were directed particularly to the milk supply, but I found the infected families obtained their milk from different sources, and if a case of diphtheria occurred at either of the dairies, the fact was carefully concealed. There was no disease among the cows, but there were instances of cats, dogs, poultry, and rabbits being ill from throat affections and cough, on premises, the occupier of which had already had diphtheria. In November an infant a year old died of diphtheria in a thatched stone cottage at Shorwell. There were two children ill of diphtheria in November in a cottage

which had recently been thatched at Yarbridge. Some of the old thatch, which was mouldy, was lying about at the time of my first visit. Their sister went to Yaverland farm to act as nurse-girl. She had a bad throat and went home in consequence for two days. One of the children at the farm became affected and died on November 22nd. The mother, a servant, and three other children subsequently had the disease, and one of two older children removed to Yarbridge developed diphtheria there. In December, also, a man living in lodgings at Carisbrooke, but who worked in Newport, where there were several cases of diphtheria, had the disease. He was so seriously ill, there was no time to hire a tent and engage nurses, so I most reluctantly put him into a cab and sent him to his home at Chilton, a cottage of two rooms in which four persons were living.

In connection with the subject of isolation, which has Isolation, been brought to your notice frequently, you considered the question of the transference of the infectious diseases hospital from the Guardians to your Authority. As it would have been difficult and costly to bring it into accord with the regulations of the Local Government Board, you rejected the proposal. You subsequently authorised me to hire a tent for purposes of isolation, should the necessity arise. As you declined to give me further instructions I will venture to state what I propose to do should it be necessary, and it may be necessary any day, to isolate a case of infectious disease, of small-pox, for example. I should hire furniture, and use the tent either for isolating the patient, or placing his family in quarantine. I should treat him myself, engaging two trained nurses, and order food, medicines, and necessaries in the name of your Authority. Of course, a tent is a make-shift arrangement, but it is better than nothing. In my opinion, taking all the circumstances into consideration, by far the best and most economical course would be to build a small isolation hospital for the Island in some central position. It would be managed by a joint committee, and would properly be placed under the superintendence of your Medical Officer of Health, who could be communicated with by telegraph from any part. Spread over the whole Island the cost would be infinitesimal, and if it were never used it would be money well laid out, as premium on insurance against such a scourge as an epidemic of small pox or cholera.

I have constantly before me evidence that Schools of Spread of infectious diseases at Schools. all kinds are the principal foci from which epidemic diseases such as scarlet fever, measles, whooping-cough, and diphtheria are spread. School-masters and Managers are naturally unwilling to close their schools, although

I must say they usually waive their objections most courteously when the necessity for doing so is pointed out to them. Not infrequently the first intimation of the existence of epidemic disease in a village has come from the School authorities. When a large number of children are absent from School they become anxious about the grant, and desire, therefore, the certificate of the Medical Officer of Health. The Schools at Lock's Green and at Hulverstone, as I have said, were closed at my suggestion, the former in the summer, the latter at the close of the year, because of the general prevalence of measles in those districts.

Compulsory notification of infectious diseases.

Your Committee in making their report upon my Annual Report for the year 1885 stated that in their opinion the notification of infectious diseases should be made compulsory. Although this is the only thoroughly satisfactory method of checking the spread of infectious disease, it has occurred to me a modified plan of compulsory notification would do much good. It is that in any case in which a child remains from School because it is sick the parent or guardian should be compelled to notify to the master at once the nature of the illness. This is often done. When the disease is of an infectious nature the medical man in attendance should give the parent or guardian the name of the affection in writing, receiving from the Sanitary Authority a small fee in each case. The parent or guardian would at once hand the medical attendant's note to the Master of the School, who would send it, he receiving a small fee also, to the Medical Officer of Health. In no case should the infected child be allowed to return to school until permission has been granted by the certificate of the Medical Officer of Health. The masters of schools are able to render great assistance to Sanitary Authorities.

Disinfection.

Disinfection is of the first importance in the prevention of the spread of infectious disease, but it must be done properly to be effectual, and it is desirable the Inspectors should in every case do the disinfection themselves. Even the most precise directions are misunderstood, and if understood some people are too lazy or too careless to follow them minutely. The Committee to whose recommendations I have referred also expressed the opinion that a movable apparatus for disinfecting clothing and bedding should be provided for use in your Authority's District. I was instructed to ascertain what was the best apparatus for this purpose. I found that Washington Lyon's patent steam Disinfector manufactured by Messrs. Manlove, Alliott, Fryer and Co., of Nottingham, is the most approved portable disinfector. It costs about £150.

Filth nuisances, which were constantly under your notice during the past year, are becoming almost uncontrollable in certain populated places, especially in clay districts. Under sec. 42, P.H.A., 1885, you have power to undertake the scavenging of such places, and I would earnestly recommend you to scavenge Freshwater, Gurnard, Lake, and Wroxall. As regards excrement removal you may possibly receive assistance from the Company who work Mr. Walker's process, and who now scavenge part of Manchester. The convenience of sewers seems to overbalance all other considerations, but where they do not exist, at least, what is taken from the land should be returned to fertilize it, instead of being discharged into the soil to poison the drinking water, and into ditches and gutters to poison the air.

During the year my attention was several times called to collections of dung, or other kinds of filth, placed near dwellings. It is a great hardship that people should have to suffer from the carelessness and selfish indifference of others in this matter. If you possessed the urban power of sec. 49, P.H.A., 1875, your officers could effectually protect those who are so ill-treated by their neighbours.

As in previous years frequent complaints have been made to me of the nuisances arising from the deposit of town refuse in your District. Many of these complaints have come from the towns themselves, the inhabitants of which suffer from them only in a less degree than the rate-payers of the Rural District. The greatest nuisance from this cause in 1887 arose from the town refuse of Ventnor, deposited close to the highroad below Lowtherville.

In November, a Local Government Board enquiry was held by Mr. S. J. Smith, C.E., respecting the extension of your sewer at Binstead to the sea within your District, and the contract for its construction has since been let. The most rigid supervision of the work will be necessary, for unless the laying of each pipe be closely watched the public welfare may be as grossly prejudiced as it has been by the ill-constructed Yarmouth sewer.

Medical Officers of Health throughout the kingdom have submitted to their Authorities during the year regulations for the control of cowsheds, dairies, and milkshops, which have been adopted in many districts. I do not know who drew up the regulations which were submitted to you. They did not pass through my hands and my opinion of them was not asked, but they seemed to me to be on the whole calculated to meet the end in view. It is to be regretted you did not proceed to approve these or similar regulations. The importance of a pure milk

Scavenging.

Accumulations
of filth.The refuse of the
town.The Binstead
sewer.Cowsheds,
Dairies, and
Milkshops.

supply to your District is far too serious to admit of indefinite postponement or even of delay. Typhoid fever has been widely spread through the agency of milk, and researches have been, and are being, conducted which go to prove that other diseases may not only be spread by milk contamination, but may be due to corresponding diseases in cows. Dr. Klein has discovered a micro-organism in scarlet fever which is common to man and the cow, and this, which does not occasion constitutional disturbance sufficient to stop the secretion of milk in the cow, may be transferred, it would seem, through the milk to the bodies of human beings, and give rise to scarlet fever in them. Mr. Power's investigation of an outbreak of scarlet fever at Hendon and in Marylebone, and other parishes in London, taken in conjunction with Dr. Klein's researches satisfy many scientists, and among them Dr. Buchannan, Medical Officer of the Local Government Board, that certain ulcers on the teats of cows at a Hendon farm contained the microbe to which I have referred; that children fed on milk from cows suffering from the disease of which these ulcers are a symptom, obtain scarlatina: and that cows inoculated with the microbe of human scarlatina obtain the disease which is characterised by a certain form of ulcer on the teats. It may come to be proved that phthisis or consumption, as many believe, may be brought about in man by drinking the milk and eating the flesh of tuberculous cows; and diphtheria, it would appear, may be contracted by man from the lower animals. It is probable, also, that bacterial organisms contained in impure water drunk by cows may pass into the milk, and give rise to disease in man without affecting those animals.

Our knowledge of these matters is rapidly advancing, but we know more than sufficient already to induce us to guard our milk supplies with the greatest possible care.

Gunville water supply.

For a great number of years your attention has been called periodically to the insanitary condition of Gunville. Foul gutters and ditches are a continuing nuisance there. Enteric fever is not uncommon; and only recently you have had reported to you two cases of diphtheria, one of which has died, in a house the occupants of which are subject to the annoyance of a filthy gutter on adjoining premises. Last year a report you directed the Inspector to prepare, at the instance of one of your members who conscientiously persevered in keeping the subject before you, amply proved to you that the strong representations made about the insufficient water supply of the village were based upon no exaggerations. You opened communications with the Corporation of Newport with a view

to the independent supply of Gunville by them. So far as I have been able to gather there was no real or insurmountable obstacle to so desirable a consummation. By a vote of your Authority all negotiations were put a stop to, and no attempt has been made to revive them. I beg to point out to you that your Authority are in default under sec. 3, P.H. (W.) A., 1878, as regards the water supply of the houses in Gunville, and of those in several other places in your District. The duties of Sanitary Authorities of towns to those they represent does not cease at the borough boundaries. The sanitary condition under which their neighbours on the other side of those boundaries live is of the very first interest to them. They should be most anxious, and should use every endeavour, to supply them with wholesome water, for thus they will help to secure themselves against disease. The question has a financial aspect also for them. I have been told that one-fourth of the income of the prosperous Newport Waterworks is derived from your District. I gratefully acknowledge the benefits bestowed upon outsiders by the boroughs in this matter, and especially by the Corporation of Newport, whose Borough Surveyor has always done his best to facilitate the supply of Newport water to houses within your District. The Ryde Waterworks are scarcely completed, and the attention of the Corporation is naturally concentrated, as yet, on the supply of the town proper. But if the law does not forbid, I would submit it would be sound sanitary and commercial policy on the part of the Corporation of Newport and of the Corporation of Ryde, when they are in a position to do so, to be at the expense of laying pipes, as private water companies do, to the doors of consumers beyond the borough boundaries. Newport might easily extend the main which supplies Parkhurst Barracks to Horsebridge hill, and there would be no difficulty in laying pipes from the high level pipe at Carisbrooke to Gunville; and at Ryde the water mains may be readily extended at Binstead.

Duties of Sanitary Authorities of towns to the districts beyond them.

The Whitwell water supply was opened on July 13th. I am indebted to Mr. Theodore Saunders, C.E., of Ventnor, who has with so much ability and in such superior manner carried the scheme through, for the following particulars of the work. "The water for this supply is obtained from two small springs from the Upper Greensand at Bierley, which, together with land sufficient to build the reservoir, were made a free gift to the people of Whitwell by Mr. E. Granville Ward of Weston Manor, Freshwater. The scheme was initiated by Mr. William Spindler of Old Park, near Ventnor, who contributed upwards of £450 towards the undertaking, and it is not

Whitwell water supply.

too much to say without the energy and determination of this gentleman the work would never have been carried out. In addition to the handsome contribution already referred to, Mr. Spindler assisted the scheme by engaging at his own cost, Mr. Theodore Saunders. The reservoir contains 4,500 gallons, and is so situated that the whole system is supplied by gravitation. The length of mains including the extension to Nettlecombe is 3,900 yards, and the mains for the greater length are 3in. cast iron socket pipes. There are 13 public fountains placed at convenient distances in the highroad at Bierley, Whitwell, and Nettlecombe, in addition to which many of the houses have already a private supply laid on.

The cost of the complete works is as under:—

Reservoir	...	...	...	...	£70	0	0
Mains, Excavation, Searching for							
Water, &c.	...	...	...	...	£533	0	0
Public Fountains	..	...	...	...	£78	0	0
					<hr/>		
					£681	0	0

The whole scheme may thus be reckoned as costing at the rate of 3/6 per yard.

The works were completed and opened on the 13th of July, 1887, and may be considered one of the best Jubilee memorials in the Island.

NOTE—It would be very desirable to extend the scheme to Southford Mill, which could be done at a cost of about £60."

One of the stand pipes at Whitwell has been placed near the School, a most important provision, which is due to the foresight of the Vicar of Whitwell.

Wootton water
supply.

There are one or two deep wells of excellent water, but most of the wells of Wootton are surface wells, containing water of doubtful quality. For their drinking water the inhabitants have depended upon the public pump at Wootton Bridge, which in dry summers and in times of drought has seemed likely to fail them. Ten years ago the question of an independent water supply was considered, and a scheme was proposed which was to cost £500, and a rental of £10 per annum was to be paid to the owner of the water. The present scheme originated with Mr. Please, of Wootton, who has so ably carried out the work. He named the subject to Mr. Holford's steward, and eventually the water was given. I am indebted to Mr. Please for the following particulars of the supply.

The water is obtained from a bed of gravel and sand in a meadow above the new road to the north of the village.

Mr. Holford of Park Lane, London, gave the water, and sufficient land to build the reservoir, to the people of Wootton, as well as a money contribution.

Two sets of pipes lead the water, which is exceptionally soft, from the gravel into a catch-pit, from whence it passes into a reservoir, the capacity of which is 1,800 gallons. The daily supply is 6,000 gallons. From the reservoir the water is led in 2in. Dr. Smith's patent iron pipes to a fountain erected in the Newport road, as a memorial of the Queen's Jubilee. The designs for this fountain was prepared and presented by Mr. Thomas Chatfeild Clarke of Oakfield, Wootton Common. From the fountain the pipes are continued to Wootton Bridge. Provision is made opposite each house, by means of a tee piece, for laying on the water. Every house so supplied will pay 5/- a year, large consumers, as dairymen, will pay 10/- a year. The income thus derived will be devoted to the maintenance of the works. The total length of the pipes is 385 yards, and the total cost of the work was £125 (about 6/6 per yard) which was raised by voluntary contributions. The pipes could be carried to the other side of the bridge for an additional £25.

All honour is due to the men, and to those who assisted them, who initiated and carried out an independent water supply for Whitwell and for Wootton. The examples of these villages is one which other places in the Isle of Wight may well follow.

During the year 1887 the Sovereign of the British Empire completed the 50th year of her beneficent reign. The close of such a period has invited all kinds of retrospections, and of these none is more interesting or more calculated to teach lessons, which, if appreciated and applied will bring blessings to millions of the human family in the future, than that of the remarkable advance of the Science of Health. At the commencement of the Victorian era the civil registration of deaths began, and information was gradually gained as to the influence of disease on age, sex, condition of life and locality. In 1840 the system of public vaccination was inaugurated, and as knowledge advanced the causes of some of the preventable diseases were discovered in the fouling the atmosphere by the emanations from human bodies, and of water by filth, and, later, in the action, in many cases, of definite organisms. Dr. Thorne Thorne in his inaugural address to the Epidemiological Society traced the history of certain preventable diseases during the past 50 years as typical of the progress made. He showed that whereas small-pox killed 57·2 persons in

The advance of Sanitary science during the past 50 years.

every 100,000 living from 1838-42, it killed only 6·5 in every 100,000 from 1880-84; that the causes of typhus or gaol fever, which was formerly such a fearful scourge, having been found and met by letting wholesome air into crowded districts, the mortality had been reduced to 0·1 per 10,000. He spoke of typhoid fever having been differentiated from typhus by Sir William Jenner, and having been found to be due to conditions brought about by failure to deal properly with the solid and liquid refuse of populations; and of Dr. Ballard's discovery that this disease was communicated through the agency of milk; that frozen cream and ices acted as vehicles of the infection; that intermittent water services led to its distribution; and that even when present in drinking water in such infinitesimal quantity that it could not be discovered by any chemical or physical analysis, it could, as in the Caterham outbreak, lead to wide-spread disaster. To quote Dr. Thorn Thorn—"The story of the past 50 years is one in which the principles of preventive medicine have step by step been unravelled and applied to the saving of human life. The actual sources of disease have been laid bare, and in the case of many communicable affections their cause has long been traced to organisms, definite in character, always breeding true, and having known habitats. The results are shown by the significant lessening of the general mortality and the marked reduction in the death-rates of the more preventable diseases; results which involve as a natural consequence an improved vitality among the living. The work of disease-prevention during the Victorian era has proceeded on a scale that it would be difficult to define, but it can be in part measured by the influence it has had in sweeping away much of the misery which is the harder to bear because its cause is preventable, in elevating the condition of our fellow men, and in bringing health with its attendant happiness and prosperity to an untold number of British homes."

The Inspectors have furnished me with the following ^{Inspection work.} summary of their work:—

	WEST MEDENE.	EAST MEDENE.
Number of nuisances and other matters reported	309	259
Number of nuisances abated without final notice	158	147
Number of final notices served	36	31
Houses reported unfit for habitation	8	3
Houses placed in habitable repair	5	3
Houses closed by order	3	0
Houses cleaned and disinfected	36	17
Legal proceedings under Sec. 96, P.H.A.	—	3
" " 126 " 	—	—
" " 6 P.H. (W.) A. ..	—	—
Cases of overcrowding reported	2	2
Cases of overcrowding abated	2	2
Privy cess-pools provided and properly constructed	52	29
Privies put on the pail system	35	13
Wells sunk and improved and supplies of water obtained	24	15
Wells cleansed	8	11
Wells closed	3	1
Defective pumps repaired	7	4
Pumps provided.. ..	10	7
Houses drained, re-constructed, and connected with the sewer	5	15
House drains repaired and trapped.	42	35

Houses built and occupied in 1887.

WEST MEDENE.			EAST MEDENE.		
	With Certificate	Without Certificate		With Certificate	Without Certificate
Carisbrooke	3		Bembridge	6	
Freshwater	13		Brading	2	
Northwood	13		Yarbridge	2	
Shalfleet	2		Morton	2	
Shorwell	2		Lake	1	
			Wroxall	1	
			Bonchurch	1	
			Lowtherville	3	
			Whitwell	2	
			Niton	1	
			Newchurch	1	
			Winford	1	
			Alverstone	2	
			Haven Street	4	
			Binstead	2	
			Wootton	1	
			Fairlee	1	
	33			33	

The following Meteorological Summary for 1887 is taken from the observations of temperature and rainfall made by the Rev. E. W. Watts, M.A., at Lugley house, Newport, about 44ft, above the sea level.

MONTH.	Maximum Tempera- ture of Month.	Minimum Tempera- ture of Month.	Mean of Daily Maxi- mum.	Mean of Daily Mini- mum.	Mean Tem- perature	Amount of Rain in inches.	Days of Rain.	Greatest fall in one day.
Jan....	51·6 on 25th	14·0 on 2nd	40·9	29·7	35·3	3·36	15	1·09 3rd
Feb...	53·3 on 5th	23·0 on 17th	45·3	34·4	39·8	1·05	9	0·52 2nd
Mar...	56·5 on 28th	19·0 on 19th	46·8	32·5	39·6	1·22	13	0·29 22nd
April..	68·0 on 19th	22·8 on 17th	54·0	35·1	44·5	1·24	11	0·32 23rd
May...	69·9 on 31st	34·3 on 1st	59·8	34·3	51·5	1·47	16	0·33 19th
June...	83·0 on 15th	40·1 on 27th	70·8	48·6	59·7	0·89	3	0·79 2nd
July...	85·7 on 4th	41·5 on 1st	75·4	52·8	64·1	1·03	8	0·42 17th
Aug...	85·2 on 6th	37·2 on 15th	74·6	50·0	62·3	1·76	6	1·53 30th
Sept...	67·8 on 20th	34·7 on 29th	62·8	48·1	55·4	3·94	17	0·85 17th
Oct....	62·7 on 8th	20·5 on 26th	52·6	37·5	45·0	1·45	8	0·88 29th
Nov...	55·4 on 2nd	21·5 on 16th	46·9	42·3	44·6	4·18	21	0·63 2nd
Dec...	52·2 on 9th	20·5 on 30th	43·8	33·4	38·6	2·84	14	0·52 14th

The total rainfall at Newport in 1887 was 24·43 inches against 38·07 inches in 1886 and 29·32 inches in 1885. The number of wet days in 1887 was 141 against 202 in 1886 and 159 in 1885.

The Weather of
1887.

Mr. Edward G. Aldridge, F.R. Met.Soc. in the very valuable observations he has published on the weather of 1887, and with a copy of which he has kindly furnished me, says, "The most marked characteristics were cold and drought.

At Greenwich the mean temperature of the year was 48·3, or 1·8 below the average. (1886 was 0·9 below and 1885 was 1·1 below. 1884, however, was 1 *above*. 1881 was 0·9 below, but 1879 was 3·3 below! The mean

temperature of 1879 to 1887 was 0.82 below the average, a very large amount when continued for nine years! In considering questions of deficient or excessive temperature we have to multiply intensity by duration. An equivalent of the conditions here noticed would be if eight of the years were of precisely the average temperature, the ninth being about $7\frac{1}{2}$ below the average. A deficiency of $7\frac{1}{2}$ for a whole twelvemonth would be simply miraculous, while the eight years would perform absolutely nothing in the direction of restoring the thermal equilibrium. It is satisfactory to know that warm groups of years occur as well as cold. The mean temperature of the twelve years from 1857 to 1868 was exactly half-a-degree above the average. We are obviously now 'under a cloud.' Not since 1872 has there been a year whose mean temperature was $1\frac{1}{4}$ above average. In that year it was 1.6 , but in 1868 it was 2.2 , and in 1846 it was 2.4 .) The total rainfall of the year was 19.81 , or 21.6 per cent. below the average of 73 years, but 1864 was drier by 3.41 . Number of wet days, 142."

"At Newport, Isle of Wight, the mean temperature was only 48.3 , or 0.2 less than that of Llandudno. (The mean seems to work out too low for the latitude.). The total rain was 24.43 , being more than that of 'Lamorna,' situated much farther to the west. Number of wet days 141.

At Ventnor, Undercliff, Isle of Wight, the mean temperature of the year (in a somewhat sheltered position, about 150ft. above high water spring tides), was 50.2 , or 1.3 below the average of 1850-79. The district seems to have been specially favoured by nature, for the rain, (24.36) was only 14.9 percent. below the average of 1840-79. The guage is 3ft. above ground. The number of wet days was 135, or 14 per cent. below average. The extremes of temperature were 80 (in July) and 25 (in February). The driest month as to rain was March (0.89); the driest as to number of wet days was June (3). The wettest month was November (4.97 on 21 days). The warmest months were July and August (64.2); the coldest was January (39.8). The mean temperature of July was 1.9 above average, August 1.6 above, and January 2.3 below. August was very slightly (0.07) cooler than July. The hours of bright sunshine largely exceeded those of any one of the previous five years, the total being 1,910 (about $5\frac{1}{4}$ per diem), or 330 more than at Kew, and 490 more than at Hodsock."

Mr. Aldridge concludes his observations on the year by appending a table shewing the extremes of temperature, which took place at our warmest and at our coldest stations:

“ St. Mary’s, Isles of Scilly, (80ft.)

		MAX.		MIN.
January .....	.....	54	.....	37
February ...	.....	54	.....	33
March .....	.....	54	.....	32
April .....	.....	55	.....	37
May .....	.....	58	.....	41
June .....	.....	73	.....	45
July .....	.....	72	.....	54
August .....	.....	71	.....	53
September ...	.....	65	.....	45
October .....	.....	59	.....	41
November ...	.....	54	.....	39
December ...	.....	53	.....	33

Approximate mean temperature 50·5.

Ben Nevis (4,410ft.)

		MAX.		MIN.
January .....	.....	36·8	.....	11·3
February .....	.....	36·1	.....	18·1
March ...	.....	38·1	.....	9·0
April ...	.....	42·0	.....	13·1
May .....	.....	47·0	.....	19·3
June .....	.....	67·0	.....	31·0
July .....	.....	56·8	.....	30·8
August ...	.....	54·8	.....	26·5
September .....	.....	60·0	.....	24·4
October .....	.....	50·4	.....	14·8
November .....	.....	37·9	.....	13·3
December .....	.....	35·6	.....	11·7

Approximate mean temperature 32·7.

The above table partly corroborates what has been noticed before, viz., that it is not on the slopes or on the pointed top of an eminence that we must look for the greatest degree of nocturnal frost, but in the valleys below. I am a little surprised, however, to find that the rule is indicated even by observations taken at an altitude of nearly 0·84 of a mile. In January the minimum temperature on Ben Nevis was rather higher than at Cardington, and in February it was 2·1 higher than at Cambridge. It would be better, however, to compare the mountain observations with those of the Scottish valleys.”

The fact alluded to by Mr. Aldridge, taken in conjunction with the cold clay soil would seem to account for the low night temperatures which appear to obtain at Newport, assuming there is no source of error in the observations, and which so unfortunately lowers the mean temperature of the centre of the Isle of Wight as

at present observed.

It would be highly satisfactory if someone resident upon the hills above Newport, who possesses opportunity and sufficient leisure, could be induced to make observations.

3. THE SANITARY STATE OF THE DISTRICT GENERALLY AT THE END OF THE YEAR.

As the year 1887 waned epidemic diseases were spreading in the Isle of Wight, and at its close there were cases of scarlet fever, measles, whooping-cough, and diphtheria in different parts of your district.

Health of the District.

Zymotic diseases

Scarlet fever, introduced from Ventnor, prevailed at Bonchurch, Lowtherville, and Steephill Cove. There was a case at Whitwell, also introduced from Ventnor. There were a large number of cases of this disease at Yarmouth, and one case, introduced from London, at Brooke.

Scarlet fever.

Measles was epidemic at Wootton. There were cases in the neighbourhood of Sandown, into which place the disease was introduced from Cowes; a case at Yarmouth, also introduced from Cowes; other cases at Yarmouth, introduced from Shalfleet; and two or three cases in the Northwood district, and at Wellow and Brooke, the embers of the epidemic which had rolled from Cowes over the north-west of the Island in the autumn.

Measles.

There were cases of whooping-cough at Gurnard, Whippingham, and Haylands.

Whooping-cough

Diphtheria was still tenaciously clinging to Freshwater, and there was a case at Chilton. There were also cases of this disease at Yaverland and Yarbridge.

Diphtheria.

Quite at the end of the year a case of enteric fever was beginning to develop at Shalfleet, and there was a case at Thorncross, near Brighstone.

Enteric fever.

Speaking of your District generally, it is exceedingly discouraging to be unable to report any very decided and permanent advancement in its sanitary condition. This arises not from want of effort on the part of your Authority to contend with palpable nuisances as they are brought before you, or to indifference about the exact needs of different localities, but in great measure from hesitancy and apparent disinclination to accept greater power than you possess, to enable you not only to deal more promptly and effectually with such nuisances, but also that you may be in a position to require precautions to be taken for the permanent security of the public health. In addition to this your mode of administration

Sanitary state of the District generally.

Administration.

is not favourable to reform. There is much truth in the saying, "everybody's business in nobody's business." One of your difficulties is that it is the special business of no one among you to initiate measures of sanitary advance. Should a member consider it his duty to take up some question, as, for example, the water supply of Gunville, and press it forward until it is ripe for settlement, another of your difficulties may appear, namely, that the personnel of your Authority is seldom twice the same. At a fuller meeting than usual a majority composed of those who have not followed the question, and who do not appreciate its bearings, may nullify the work of months. Another difficulty is that precedence is given to your routine poor-law duties, and the far more important sanitary business is taken later in the day, consequently the hour of departure of trains lessens the attendance at the Sanitary meetings—especially is this the case if the Guardians' meeting is prolonged—and thus continuity is lost. The time allotted to sanitary administration is far too small for the bestowal of proper attention upon other than the Inspector's work. Considerations such as these induced me to advise you to avail yourselves of the provisions of sec. 201, P.H.A., 1875, which authorises you to appoint a Committee, as less inconvenient than the other alternative for securing continuity and more efficient administration, weekly meetings. Even small urban authorities find it essential to have sanitary committees, and, if it is necessary to them one would suppose such a committee must be indispensable to you, who have towns, and parts of towns, and large villages under your jurisdiction.. Your District is a most difficult one, possibly one of the most difficult rural districts in the kingdom, and the earnest study and constant devotion of the ablest of your number, aided by skilled advice, are requisite for the elucidation of several of its problems. There is sufficient evidence that what is meant by sanitary administration from the point of view of the medical health officer is not in the least realized by many. His district ought to be so free from obvious nuisances that the Medical Officer of Health should never see them. And yet it is to the abatement of obvious nuisances that the greater portion of your very limited time is given. From lack of time to discuss them, questions of serious import to the public health, and which involve obligations incumbent upon you, are referred to parochial committees. If nothing comes of the reference the subject is too often allowed to rest. For example, one of the great questions awaiting your attention is that of

water supply. Sec. 3 P.H. (W.) A. imposes upon you the duty of seeing that every occupied dwellinghouse has an available supply of wholesome water. Before the passing of this act in 1878 the question of the water supply of Tinker's Lane engaged your attention and that of a parochial committee, but the houses in Tinker's Lane are still without wholesome water, and for the past five years the question of the water supply of that place, I think I am right in saying, has not been taken into consideration by you. As I shall proceed to report, there are a great many houses in your District without wholesome water, although their number has been reduced by leading water into Whitwell and Wootton, which beneficent enterprises have been chiefly due to the energy and public spirit of one or two private individuals assisted by the benevolence or self-help of others, and not to any action on the part of your Authority. Another question which has been allowed to rest is that of the Freshwater bye-laws. Bye-laws drawn up by the Freshwater parochial committee were approved by you, and submitted to, but not sanctioned by the Local Government Board, some of them not being authorised by the statute, and others giving sanction to insanitary arrangements. The Local Government Board could not possibly sanction such bye-laws, and if you had listened to my advice you would not have asked them to do so. I would strongly recommend you to reform your system of administration and to arrange that questions of sanitary improvement shall be initiated and kept before your Board.

In reporting upon the sanitary state of the District generally at the end of the year it will be convenient if I describe very briefly the state of each of the more prominent places in the two Medenes.

Bembridge is in the main, dependent for its drinking water upon the "north wells," which is a long distance from many of the houses. The wells generally are merely surface soak wells which become rapidly dry in summer. Rain water is badly collected and stored, excepting at houses recently built, as those in Lock's Lane. The certificate is necessarily granted for a rain water supply only, which is often insufficient. Bembridge requires a public water supply badly, and this may be readily obtained, probably, by boring through the Chalk of Bembridge Down just beyond the Tertiaries and at the lowest point to the west. The sewer, which has a good fall, is flushed with sea water in summer time by means of a cart. In my experience the ventilators left open are often offensive. A ventilating shaft

East Medene.
Bembridge.

near Lock's Lane has diminished the nuisance at that spot. Several houses at the top of the High Street, one of the most neglected properties in Bembridge, are in a far more satisfactory condition than I have hitherto seen them. They have now an available rain-water supply upon the premises. Seymour Place, too, which should never have been allowed to be built, and Harbour View (the old coast-guard station), belonging to the same owner were, for the time being, in a more satisfactory condition than usual at the end of the year.

Brading.

Brading is supplied with water chiefly from old public wells. Some of these wells which had been seriously and palpably polluted are no longer used, so that as Brading has extended the water supply has diminished. New houses, some of them large ones—as those in the New Road—are certified for occupation with a rain-water supply only. One house with a polluted well has been certified—not upon my report, as reference to the papers connected with the certificate will prove—because there is a public well in the street. The question of an independent water supply for Brading will, before long, become a pressing one. It may readily be obtained from the heads of the streams. Many more houses have been connected with the sewer, and others have been disconnected from the old Commissioners storm-water drain, but the withey-bed ditch into which it discharges is still offensive, showing that sewage continues to find its way there. The stench from some of the sewer ventilators is very great and continues to be a source of complaint to me. The erection of shafts has modified this nuisance in two or three places. In the absence of more effectual flushing I would suggest the use of some deodorizing process, such as that of Reeves, for all your sewers.

Yarbridge.

The Yarbridge end of Brading, which is within the Brading special drainage district, is not sewered. An old covered drain, which drains three or four houses, discharges into an open gutter and occasions a great nuisance, which is dangerous to the health of the inmates of the adjacent cottages. It is proposed that the owner of the adjoining property should cover up this gutter. It is an injustice to the people of Yarbridge who have paid drainage rates for years that they should not have a properly constructed sewer, but must submit to such a wretched make-shift arrangement as the one proposed, which will be a sewer ventilating into the back yards of the houses above. The cottage referred to may be protected by carrying the drain across the road, but in this case a second

deposit of filth would occur. The present drain has deposited filth by the side of the railway to the depth of 3ft. or more.

Many of the houses of Adgestone have no water ^{Adgestone.} whatever, as I have previously reported to you. There are two wells used by the people, one of them, known as "Mew's Well," by the roadside. If this were deepened and re-constructed and the top of the well covered, a pump being fixed, as was done at Middleton, a work of beneficence which was the result of the patient persistence of one of your number, the benefit to the public health and to the comfort of the people of Adgestone would be great. A well on the moor, known as "Jenny Deal's" well, is used by many of the inhabitants of Lower Adgestone. It should be protected, but it is situated on private land.

Since the end of the year measures have been taken ^{Lake.} to supply Lake with water from the Sandown Waterworks. Whether the Sandown water supply is above suspicion or not, this will be an immense boon to Lake. Lake is an example of places which spring up just beyond the boundaries of towns, free from any kind of efficient control from rural sanitary authorities. Shamefully constructed houses with scarcely any outlet have been crowded on to little patches of land, in a manner which ought never to be permitted in any place which has not public sewers into which they may drain. In the absence of sewers I think your duty will be to see that storm water is kept out of the cess-pits, and to empty them under the scavenging sec. 42, P.H.A., 1875.

It will be well if Gatten can be supplied with water ^{Gatten,} from Sandown or Shanklin. The leaky cess-pits there have poisoned the water of several houses certified during the last five years.

Some houses in the rural District of Shanklin obtain ^{Shanklin.} their water from the Shanklin town supply, others from soak wells. The stream which runs through the gas-works is less polluted before it reaches them than it was, as overflows from cess-pits have been cut off from it. Complaints of pig nuisances are common, and for this and other places you require the powers of the urban sec. 47, P.H.A., 1875, and urban sec. 49, P.H.A., 1875.

Wroxall is situated on the Gault, which does not ^{Wroxall.} yield good drinking water. If good water is found in Gault districts it is accidental, and usually comes from a pocket in the clay filled with gravel and sand. Several of the houses in Wroxall have no water supply at all,

and in others rain water is badly collected and stored. The people occupying houses to the north of the place, houses in which there have been cases of typhoid fever within the past two years, use water issuing from a railway embankment in which, I have been informed, is a large unused leaky cess-pit, now covered up. A great many of the inhabitants obtain their drinking water from a supply known as "Mrs. Fallick's supply," upon which I have had to animadvert for some years. An Inspector of the Local Government Board and a Committee of your Authority have supported me in my opinion of this source of supply. The Parochial Committee have at length proposed, I believe, to meet the objection to it at a cost of £20, which will include the placing of a stand-pipe in the street. This is satisfactory so far as it goes, but it will be a long distance to send for water from Castle Road, and the other end of Wroxall. It is to be regretted a larger scheme of water supply, which would have placed the poor of Wroxall in the favorable position of the people of Whitwell, has been considered impracticable. It is absolutely essential the supply in question should be placed above suspicion, but the reconsideration of the subject of the water supply of Wroxall cannot be postponed for long. As the filth of the place will not soak into the clay Wroxall drains into the stream, although it is somewhat less polluted than it was by sewage since some of the drains and cess-pit overflows have been cut off. My dream was that by enlightened administration and by compelling each individual to do his duty, the general well-being might be so far secured that you would be able to avoid the expense of sewerage Wroxall and such places for an indefinite period. I am no longer of this opinion, and already it is necessary you should scavenge Wroxall.

Bonchurch.

Bonchurch, which stands on an undercliff of débris from the Chalk and Upper Greensand behind it, is supplied with Upper Greensand water from the Ventnor waterworks. The mode of drainage is into disused wells and deep cess-pits. It is truly said no one knows whither the sewage of Bonchurch goes. It certainly is not safe to drink from wells in Bonchurch, especially on the lower levels.

Lowtherville.

Lowtherville, a considerable suburb of Ventnor on the northern slope of St. Boniface Down, is also supplied from the Ventnor waterworks. The water is badly stored within many of the houses in small uncovered cisterns, which are not often enough cleansed. The closets have no flushing service, notwithstanding

the independent water supply. A large number of the houses have sufficient curtilage for the disposal of sewage and house refuse, but most of the cess-pits are leaky. Lowtherville is a place which requires frequent supervision.

Upper Ventnor is the part of the town of Ventnor Upper Ventnor. which adjoins Lowtherville on the opposite slope of the hill. It is also supplied from the Ventnor waterworks. It is drained by one of the sewers of your Authority, which discharges into the sea at Steephill Cove. It is not flushed, but it has a very steep gradient. The stack pipes of the houses are the only means of ventilation, and sewer gas issues from imperfect joints and causes a nuisance at high tide, especially if a pipe happens to be broken.

The water supply of St. Lawrence is from wells, and St. Lawrence
and the Under-
cliff. as the houses drain into leaky cess-pits in "made ground," they are liable to pollution as at Bonchurch. Pigs kept in ill-constructed sties near the house are a great nuisance in connection with some of the cottages. Fortunately old Park, a considerable property in the Undercliff which is likely to be largely built over in time, is in the hands of an enlightened gentleman and earnest sanitarian to whom the water supply of Whitwell is due. The houses built by him are supplied with water from the Upper Greensand, and have every needful appliance for the protection of health.

The sanitary condition of Whitwell has been altogether Whitwell. changed by its independent water supply. Situated unfavourably as it is upon the Gault, with a clay subsoil there was the more urgent necessity it should have an abundant supply of pure water. Several of the houses are old and damp, and the drainage arrangements of some of them leave much to be desired, but it is to be hoped that should epidemic disease again visit Whitwell, it will be less widespread and fatal than diphtheria proved itself to be in 1885-86. It is to be regretted the owners of property at Southford could not be induced to contribute between them the £60 requisite to continue the supply to that place, where their tenants really drink from the polluted stream directly or from a well into which its water soaks.

The greater portion of Niton also stands on the Gault. Niton. Water has been led into the village from the Upper Greensand beyond it to supply a few of the houses. From an engineering point of view there would be far less difficulty and expense than at Whitwell, in supplying Niton with as pure water. The stream which runs through the village is polluted up to its source, and the village may be said to drain into it.

Wroxall, Whitwell, and Niton in the East Medene, and Shorwell in the West Medene, which stand on narrow outcrops of the Gault, have flowing through them streams of what should be the most wholesome water from the over-lying Upper Greensand. Into these streams the villages drain their filth as it cannot soak away into the soil, while lower down their course people drink from them.

Godshill.

Godshill on the Lower Greensand has abundant well water, but the wells are unprotected dip wells situated in manured gardens, and are liable to pollution from soakage from the soil and from surface drainage and pig-sties. When they become obviously contaminated the inhabitants resort to the well of a neighbour for their drinking water. There is a well in the centre of the village which is much made use of in this way. Notwithstanding foul drains and ditches containing human excrement the sanitary condition of Godshill has been much improved during the past three or four years, a great many midden closets having been reconstructed there.

Newchurch.

There are one or two deep wells of excellent water in Newchurch, which stands on an outlier of the Upper Greensand, but for the most part the water of Newchurch is obtained from unprotected surface wells. Pigs are kept there so as to be a nuisance, and a good deal of slop water finds its way into gutters and ditches.

Arreton.

Arreton obtains its water from dip wells—which are of the ordinary unprotected kind—in the Lower Greensand. They are all more or less subject to pollution from the surface or by soakage, as is a public well to which a pump is affixed. Several of the old thatched houses in Arreton are dilapidated and some of them are scarcely fit for human habitation.

Haven Street.

The condition of Haven Street at the end of the year was better than I have previously known it. Standing, as it does, on Bembridge Clay, foul ditches and gutters are common, but these are fewer in number than a year ago. Some of the privies have been reconstructed, and pig keeping is less a nuisance. The water is very unsatisfactory, being supplied from surface wells. It was unfortunate the boring to the Bagshot Sands was relinquished by the benevolent founder of the Longford Institute, as one stand pipe of water from such a source would have been a great boon to Haven Street.

Haylands.

A suburb of Ryde, Haylands is supplied from the Waterworks of that town with water from the Chalk and Lower Greensand. Its use should be more general as much of the well water is of doubtful character. It is drained by a sewer connected with the Ryde system. It

is not flushed, and the road ventilators cause much nuisance especially in the summer and in times of drought. One row of houses are drained by a supplementary sewer into two cess-pits on a farm which require more constant attention than they have sometimes had. Two offensive trades, those of fat boiling and cat-gut making, which ought to be regulated are carried on at Haylands.

Binstead is another suburb of Ryde, but is less compact, perhaps, than Haylands is. It is supplied from wells which are liable to contamination and which become contaminated from the garden soil, from leaking cess-pits and privies, and from surface drains and pig-sties. It is very desirable the Ryde water should be supplied to Binstead. It is satisfactory the Binstead sewer is to be continued to the sea within your own district. I have not had an opportunity afforded me of examining the plans, but I conclude as they have received the sanction of the Local Government Board, provision will be made for efficient flushing and ventilation. It is desirable that houses within the specified distance should connect with the sewer. Complaints of nuisances arising from the keeping of pigs for commercial purposes, as must inevitably be the case in the neighbourhood of towns, have been frequent at Binstead. If sec. 47, P.H.A., 1875, were in operation in your District, and if you were to regulate the keeping of pigs, the effect would be salutary at Binstead and elsewhere if only by inducing greater care.

Excellent water is to be found at Fishbourne if the stratum of rock some 20ft. beneath the surface be pierced. The crowns of the wells, and especially of the public well, should be better protected. The affliction of unauthorised sewers is known at Fishbourne.

Wootton is one of those places in your District the sanitary state of which at the end of the year 1887 showed permanent advancement, an independent water supply having secured the people of Wootton against many risks in the present and future. A secondary advantage particularly in dry weather, is that the sewer can be flushed. The overflow pipe into the sewer from the catch-pit opposite the New Road at Wootton causes a most offensive nuisance when the tide is low and the wind is eastward. Had an opportunity been afforded me of inspecting the plans of the extended sewer, I should have suggested the trapping of this overflow pipe.

The condition of Gurnard, which is a watering place developing free from all efficient sanitary control, should receive your very serious attention. The water is obtained from soak wells into which the rain-water from the roofs is turned. The houses drain into leaky cess-pits

in the gravel which supplies the wells. These must inevitably become polluted. If the owners would only store the rain-water separately and properly the evil would be diminished. The future of Gurnard will be one of trouble and expense both as regards drainage and water supply.

Tinker's Lane.

Tinker's Lane depends for water upon badly stored rain-water supplies, and a few surface wells which are quickly dry in summer. One or two of these wells at the foot of the hill, however, hold out fairly well. The filthy gutter by the road-side is, perhaps, in not quite such a bad state as formerly.

Horsebridge Hill.

Horsebridge Hill is certainly in a better state since much of the sewage has been diverted from the road gutter to a meadow opposite the houses which drained into it. The people who drank water from stagnant puddles in their gardens now use the rain-water collected from the roofs of their houses. Since they were guttered these houses are not so damp. It would be a great benefit to Horsebridge Hill if the Newport water could be carried there.

Parkhurst Prison.

The nuisance arising from the drainage at Parkhurst Prison is considerably less, the sewer having been ventilated and the sewage works altered.

Parkhurst Barracks.

Parkhurst Barracks is now supplied from the Carisbrooke Waterworks. It is to be hoped your Medical Officer of Health will not have to report again the disgrace and scandal of soldiers dying from enteric fever after drinking impure water in barracks.

Carisbrooke.

Carisbrooke is supplied with water from deep wells in the Chalk, from surface wells, and from the Waterworks. It drains into leaky, and in a few instances into tight, cess-pits, into the short sewer at the bottom of the village, and into the road gutter. The state of this gutter continues to be a reproach. When not flushed by heavy rains a black stream of house slops and sometimes of fæcal matter runs down it to the Lukeley. Building bye-laws would have prevented the erection of the rookery of jerry buildings at Clatterford and the gross invasion of the rights of others. In one of these houses a case of enteric fever, which I have previously mentioned, occurred. The best of them has recently become the property of an eminent savant, who was formerly a member of my profession. He immediately did away with the insanitary leaky cess-pit, took up the drain to it and removed the excrement which had leaked from it beneath the passage of the house, and constructed an earth closet. He made a tight cess-pit for the house slops, which are led into it through

a well constructed drain from a receptacle containing an ingenious ejector arrangement. The contents of this cess-pit and of the closet pail are utilised in the garden. Such a system of house sanitation applied to cottage property with scarcely any curtilage or only very small gardens, and with well arranged public scavenging, would be of great benefit in many parts of your District.

Gunville, with its foul ditches and poverty of water Gunville. continues in about the state it has been in during the five years I have known it officially; some of the privies, however, have been reconstructed. Last summer the unwholesome road-side wells, which are certainly not within a reasonable distance of the houses of Gunville, were dry, and many of the people went more than a mile for their water to the stream at Carisbrooke, from which it is not safe to drink.

The people of Porchfield and Lock's Green continue Porchfield and Lock's Green. to drink from a rivulet, which is polluted by cattle, or from a pond used by cattle. In summer they go as far as Shalfleet for their water which they get from the stream there.

Water from the stream is used almost universally Shalfleet. for drinking at Shalfleet. This stream in its course from Calbourne through Newbridge receives the drainage of farm-yards and human excrement, and it is dangerous to drink from it. I have many times suggested that a well be sunk on the slope of the hill to the east of the stream. The boring tool would probably pierce the Bembridge Limestone at a depth of about 60ft. from the surface, or it may be at a less depth. Enteric fever is not unknown at Shalfleet.

The water supply of Calbourne is obtained from sur- Calbourne face wells, from open springs at the south of the village, from a public well below the grave-yard the water of which is not above suspicion, and from the stream. The Calbourne stream is much freer from pollution than it was when more of the sewage of Westover House and of many other buildings passed into it, but if a case of unrecognised enteric fever occurred on the banks of this stream, the chances are there would be an outbreak of the disease not only in Calbourne, but in Newbridge, Shalfleet, and in houses below that village,

Newbridge is supplied with water from the stream and Newbridge. from surface wells. Improvement has taken place by the conversion of some foul privies attached to a row of cottages into pail closets. It ought not to be necessary to use the leverage of disease to get things done. In this instance the existence of enteric fever in one of the cottages was brought to bear.

Ningwood.

Ningwood is badly supplied with water, a pond being much resorted to, but the inhabitants are at liberty to get their drinking water from the deep well at Ningwood House, a privilege of which many avail themselves, but for which they depend upon the life of the present estimable owner.

Wellow and
Thorley.

Wellow and Thorley are fairly well off for water. Some of the wells pierce the Bembridge Limestone, which is near the surface here. Some of the old stone thatched cottages are damp.

Yarmouth.

A badly constructed sewer has afflicted Yarmouth for years. Five years ago the street gulleys were untrapped. Since the closure of the road ventilators and the erection of ventilating shafts the sewer nuisance has been reduced to a minimum. A large number of houses have been connected with the sewer, but nearly all the closets are without flushing appliances, a condition of things in connection with small house property which is universal in your District. A nuisance which occasioned a vast expenditure of time and trouble, that would have been saved had you possessed for the good of this town the urban sec. 47, P.H.A., 1875, has been abated. I refer to the ingress of sewage to the cellar of the George Hotel. The pig nuisance in Yarmouth is less exaggerated than it formerly was. The foreshore behind Mill Terrace, on to which its privies discharge, is most offensive in hot weather. Yarmouth should have an independent water supply, which it is to be hoped it may eventually receive from Freshwater. The present supply is abundant, but it cannot be satisfactory, seeing that the wells are sunk through a soil into which the excrement of many generations has soaked.

Freshwater.

Every person who desires the prosperity of Freshwater must most earnestly hope the scheme of water supply from the Chalk proposed, or some other scheme of independent water supply, may be carried out, but it is to be regretted the inhabitants are disinclined to accept the responsibility of doing the work themselves. The recusitation of the public water supply at Middleton, by digging a well and fixing a pump, the work having been conscientiously done, has already proved of great benefit to that part of Freshwater. This restoration of an ancient water supply will be an enduring monument to the public spirit of a member of your authority to whose initiation it is due. It would be advisable to obtain a public supply for the whole of Freshwater, from some point remote from the sea if possible, it having been found that wells in the Chalk are sometimes affected by proximity to it. Water in abundance may be found at any part of the

Chalk just beyond the Tertiaries by boring, or a spring issuing from it as at the head of one of the streams, may be utilised for the supply of Freshwater. From a sanitary point of view leaky cess-pits and soak wells are incompatible, especially when placed in proximity. Undoubtedly improvement has taken place in the condition of the School Green stream, since the cess-pit overflows in the New Road, and the lower part of the High Street, and in School Green have been cut off. With a clay subsoil, which part of Freshwater has, and without sewers into which to drain, liquid filth remains on the surface, or runs off into ditches and streams if great vigilance be not exercised. When speculation in land and building takes place the individual will enrich himself at the cost of the community, if the community by their representatives permit him to do so. Speculation in building land and building have been an enormous evil to Freshwater. These will be stimulated by the opening of the railway in the summer, and your Authority will receive in the future as in the past reports of new rows of speculative buildings quickly run up on narrow strips of land and draining through unauthorised sewers into leaky cess-pits, unless some effort at control be made. You cannot avoid much longer putting sec. 42, P.H.A., 1875, into operation at Freshwater as public scavenging has long been a necessity there.

As is usually the case on the Wealden, Brooke depends Brooke. for its water, for the most part, upon soakage from the surface soil. It would be a great service to the place to bring water from the head of the stream, which is already used, for independent water supply, to a stand-pipe near the Green. I have received complaints, and the matter has been reported to you, about a nuisance arising from the farm-yard on the west side of Brooke Green, which is partly, but not altogether, due to the keeping of pigs.

Brighstone, which stands partly upon the Weald Clay, Brighstone. requires an independent water supply badly. It may readily be obtained from the head of the stream as it comes from the Upper Greensand at Buddle Hole, without prejudicing existing rights. The difficulty of the case could be met by forming Brighstone into a special drainage district under sec. 277, P.H.A., 1875. It is due to the memory of one who has passed away to say that had this been done, he would have borne the whole cost of giving Brighstone an independent supply of water after existing rights, if any exist, had been compensated, although he owned but little property in the village. Several of the houses are thatched and water cannot be collected from the roofs. Such well water as exists is for

the most part hard and some of it contains excess of iron. The stream is the chief source of water supply. Rainwater is used but it is exhausted in summer and then everybody, as one person told me, is obliged to send to the brook because there are so many visitors in the place. Now, into this brook the village drains. As in other clay districts overflow pipes and drains are carried surreptitiously or openly into ditches which are periodically flushed into the stream when rain comes. The owner of Gagger Hill farm has effected a great and long-needed improvement by diverting the farm-yard drainage from the road gutter at the bottom of Hunny Hill to a meadow near.

Shorwell.

At Shorwell an independent supply of water might be obtained from the source of the stream where it issues from the Upper Greensand, in the grounds of Northcourt, which would benefit the place. All the houses conveniently placed for that purpose drain into the stream. When it reaches the Wealden on its course to the sea the people drink from it. At one farm water is led directly from the stream into a well. I have already referred to a case of enteric fever the origin of which was, in all probability, from drinking the polluted water of this stream. Since the beginning of the year there have been five other cases and two deaths in the same family. I would here again remark that a plan of water supply started at Brighstone is likely to prove most pernicious to the public health, if imitated. It is to construct wells into which the polluted water from the brook may soak. The coarser suspended matters can be kept back by filtration, but the germs of disease may find their way into these wells.

The sanitary condition of Chiverton farm-house is much improved. The filth from the farm-yard soaked beneath the house, into the well, and on to the highway. The steward of the Northcourt property has made a tank to receive the sewage, and as it collects it is taken away and utilised on the land. Farm-yard manure is greatly deteriorated by the rain which falls upon it and washes away some of its most fertilising constituents. The ideal farm-yard is one covered by semi-opaque glass or galvanised iron roof properly guttered. The water collected, which is the purest possible, would be of the greatest service at many farmsteads.

Chillerton and
Gatcombe.

Standing as they do on the Upper Greensand Chillerton and Gatcombe have abundant water, but the wells being unprotected dip wells, are liable to pollution. Many of the inhabitants of Chillerton wisely obtain their drinking water from an iron pipe by the roadside through which a perennial stream from the Upper Greensand flows.

As one passes through your District one often wonders who in the past provided the public water supplies which

in their day were of so great benefit to many places. And one wonders how it is in the present, when the causes of disease are so much better understood, so few men are inclined out of their abundance to confer upon their poorer neighbours such blessings. Is it that the sense of individual responsibility is narcotised because public bodies are charged by the law to perform these duties?

The instructions to the Medical Officer of Health in preparing his annual report contained in the Order of the Local Government Board direct that it "should be chiefly concerned in the conditions affecting health in the District and with the means for improving those conditions. It should consider these subjects with reference to the future as well as the past, and the account of the sanitary state of the District generally at the end of the year, should, while marking the point which has been reached in the sanitary state and administration of the District, indicate directions for further consideration and action." Following these instructions in my annual report for the year 1883, I briefly considered the conditions necessary to health as regards house construction, drainage, and water supply, and I pointed out to you that throughout your District these essentials to the maintenance of health were in a greater or less degree wanting. I indicated the measures which, in my opinion, were necessary to remedy the defects I had described, especially urging upon you the desirability of obtaining urban powers in order that you might provide bye-laws for your District, and I strongly advised you to reform your mode of administration. During the year 1885, Mr. Spear, one of the Inspectors of the Local Government Board, having made a thorough inspection of your District, laid before you a series of very valuable recommendations and suggestions which in almost every particular supported the opinions to which I had given expression, and which confirmed the advice I had offered. I referred to these recommendations of Mr. Spear in my annual report for that year, and again called your attention to the sanitary defects of your District, and to the necessity for an alteration in your mode of procedure, and for the framing of bye-laws. You appointed a committee to consider my report for 1885, and you adopted but did not act upon their report, which contained important recommendations. You have again adopted the report of the committee appointed to consider my annual report for 1886. By adopting the recommendations of your committee a second time you have emphasized your approval of two of them: that you should make bye-laws and that you should at

Government In-
structions to
Medical Officers
of Health.

once take into serious consideration the question of the water supply of your District. I would strongly advise you to give immediate effect to your decisions.

Bye-laws.

The Order of the Local Government Board requires the Medical Officer of Health to "advise the Sanitary Authority on any question relating to health involved in the framing and subsequent working of such bye-laws and regulations as they shall have power to make." The Public Health Act imposes upon Rural Sanitary Authorities the obligation of safe-guarding the public health in their districts. The necessities of these districts vary as widely as their localities. Recognising this fact the Law, speaking through the Public Health Act, says, in effect, to Rural Sanitary Authorities, "if you do not find these provisions which apply to all rural districts sufficient for the carrying out the obligations imposed upon you in your particular district, you can apply for urban powers and make bye-laws." There appears now to be a consensus of opinion that you cannot perform the duties obligatory upon you in the populous places of your District without bye-laws; and there is a strong feeling among you that bye-laws of some kind for the whole of your District will alone meet the necessities of the case. With this view I entirely agree, and the following are some of the considerations which induce me to urge you to adopt it.

Bye-laws necessary for the whole of the District.

As regards unauthorised sewers.

Some three years ago you called upon a land-owner, a member of your Authority, to disconnect from the river in a strictly rural part of your District a drain which discharges the sewage of two of his cottages into the Eastern Yar. He told you he had nothing to do with your sewers and that you had better attend to them yourself. You acquiesced in this interpretation of the Law before a high legal decision in a celebrated local law case confirmed it, and the stream is still polluted from this source. You have no power to prevent the construction of these sewers, which become a charge upon the community as soon as they are made.

Gutter nuisances.

What is known as the gutter nuisance and which arises from the flow of liquid filth, it may be from a cess-pit, into the channel of the highway is often as offensive outside populous places as within them; and as the Isle of Wight Highway Act, 1883, sec. 33, which inflicts a penalty upon those who permit such filth to flow on the highway, is supposed not to meet the case, you can only effectually deal with it by obtaining larger powers. For it is manifestly absurd to expect to succeed under sec. 91, P.H.A., 1875, if you have to proceed against the person who actually creates the nuisance

and not against the owner or occupier.

Far beyond the proposed bye-laws areas, rural parts of your District are constantly afflicted by the nuisance arising from the deposit near houses and close to the highway of the refuse from the towns, and a serious epidemic accompanied by lamentable loss of life occurred from this cause at Northwood. You have no power to regulate the deposition of this refuse and even were you to take proceedings under sec. 91, P.H.A., 1875, the delay in the abatement of these nuisances would be dangerous. No hardship could be inflicted if the deposit of refuse were regulated. Surely it is not right that the health and comfort of the people should be sacrificed to save one man the trouble of drawing refuse an additional 150 yards!

Town refuse.

You have had difficulties in connection with offensive trades both near towns and far removed from them. You have no power to prevent the establishment of such trades, or to regulate them when established, or adequately to deal with nuisances arising from them. Such powers are possessed by urban authorities under sec. 112, 113, and 114, P.H.A., 1875, but the only power you have of dealing with them is under sec. 91 of the same act, and, so far as I have been able to judge, a nuisance arising from an offensive trade whether affecting a number of people in a densely populated portion of your District or rate-payers occupying a remote country cottage, would not be abated by you, if you took the matter up under sec. 91, in less time than six weeks or two months.

Offensive trades.

You have had also very considerable difficulties both in towns and in places far beyond any boundary line you could draw within which bye-laws or urban powers would apply in connection with slaughter-houses.

Slaughter-houses.

But the most serious dangers to the health of the people are those connected with defective house sanitation and defective construction of buildings, and these are to be found throughout your District both within populous places and outside them. You have no power of dealing promptly with accumulations of filth close to dwellings, or of regulating the construction of and the placing at a distance from the house of receptacles for filth. I do not refer to farm-yards, but to house refuse and slops, and house slops, inasmuch as they contain human excrement, may prove highly dangerous to health. It is no uncommon thing to see them thrown immediately above the drinking well or within a few feet of it. In my opinion the mere publishing of regulations in these matters would induce large numbers of persons to take

House sanitation and construction

greater care.

Keeping of Pigs.

The keeping of pigs has proved an intolerable nuisance when the sties have been placed close to dwelling houses and when they have been kept in large numbers for commercial purposes in places remote from areas to which the proposed partial application of bye-laws would be limited, although, of course, the pig nuisance is most acute in the more densely peopled villages and in the suburbs of towns. At present you have no power so to regulate the keeping of pigs that they may not be a nuisance, or to deal promptly with the nuisance when it exists, as an urban authority can under sec. 47, P.H.A., 1875.

Protection of drinking water.

If bye-laws were applied only in populous places, one of the greatest safe-guards to health, and one most needed over the whole of your District, would not be provided for, I refer to the protection of drinking water. Within the past eighteen months there were three deaths from enteric fever at one isolated farm, and four cases of the disease, occasioned by drinking polluted water. No more important question can engage your attention than that of protection from possible contamination of drinking water, and it is your duty to obtain any power which the law gives for that purpose. There can be no doubt the invaluable Public Health (Water) Act, which was passed especially for rural districts, is less potential for good than it is supposed to be when the Rural Sanitary Authorities administering it do not possess bye-laws. The chief defect lies in the absence of definition of "wholesome water" in sec. 6, which is consequently taken to be water free from organic impurity. Now, in a sanitary sense the significance of organic impurity lies in the origin of it. In deciding the question of the wholesomeness of water, sanitarians are most concerned about the surroundings of the sources of supply, and the existence of possible danger of serious contamination. If a new house drains into a leaky cess-pit in close proximity to the drinking well in a porous soil, the water supply of that house cannot be said to be wholesome, although the water be absolutely free from organic impurity; or if a well is quite unprotected from surface soakage in a garden which is to be periodically manured with night soil or pig manure, as most gardens in remote country places are manured, it is not likely to yield a continuous supply of wholesome water to a new house, even though the water at the time of occupation be pure. And yet the Medical Officer of Health is bound to report the supply wholesome in such cases, and the Sanitary Authority must

Wholesome water.

grant a certificate. Such examples of wholesome water occur in your District far away from the populous places in which it is proposed to apply bye-laws, but without them you can neither compel the making the cess-pit water-tight if close to a well, nor the well to be protected from surface soakage. You are practically if not legally an urban authority, and you should obtain the same power to deal with leaky cess-pits as an urban authority has under sec. 47, P.H.A., 1875, but it is just as important you should possess this power in the most rural part of your District, if the drinking water is threatened, as in the more populous places.

You would appear not to have ability to deal with dilapidated or damp houses. If secs. 91 and 97, P.H.A., 1875, do not apply, any powers you can obtain are quite as necessary in every part of your District as in certain localities.

Dilapidated and damp houses.

A not inconsiderable proportion of the new houses built in the Isle of Wight are erected in your District. In ten years from 500 to 700, or more, houses may probably be built in your District the construction of which you have not the slightest power to regulate in the absence of bye-laws. You cannot order proper foundations or damp courses, you cannot interfere with the thickness of the walls, you cannot insist upon the disconnection of the drains from the house, or their ventilation, or the ventilation of cess-pits or soil pipes. For years to come, even beyond the time of any person now living, the public health must be prejudiced by the long absence of control in the construction of new houses in the Isle of Wight. And no one who knows the District can say that building bye-laws which are necessary in populous villages and towns are not necessary wherever a house can be put up.

New houses.

It is proposed by those who wish additional powers to be as limited in their application as possible, to draw a line round certain populous districts within which alone they may be exercised. I apprehend that unless this proposed line be conterminous with parish boundaries considerable difficulties will be encountered. If it corresponds with the boundary line of the parish agricultural land will be included in many instances, and if agricultural land be included in one part of the Island it is difficult to understand the objection to its general inclusion. It is said the agricultural members of your Authority would object to have applied to them regulations they may think necessary for others, as if such regulations would inflict disabilities instead of affording protection. I have known families in farm-

Objection to universal application of bye-laws.

Agriculturists.

Necessity for
building bye-laws
for the whole of
the District.

houses in your District that would not have been desolated by bereavement had your Authority stood between them and preventable disease. Agricultural members of your Authority and others have been glad of the assistance of your officers on their farms, and have been glad to fall in with suggestions about the regulation of matters within their own control, It does not follow because you have bye-laws they will be applied indiscriminately. You have already the Sanitary Law in operation over your District, but it is not applied at farm-houses or elsewhere if the public health is not endangered. If, however, there must be privilege before the law, why not exempt farmsteads from the incidence of any additional powers you may obtain? But, if so, I would deprecate the removing from the agricultural labourer the protection they would afford him. If the agriculturists of the Isle of Wight who understand them, really object to bye-laws it can only be to those which deal with obvious nuisances. These are, however, as nothing in importance when compared with those that deal with new buildings. It is desirable you should possess power to deal promptly with obvious nuisances in the present, but that you may secure the future of the Isle of Wight it is absolutely essential you should have control over the erection of new buildings. You should be able to insist upon securities against the pollution of water; upon securities against damp—a well drained site, hollow outside walls put together with proper mortar, not mud, and with a damp course and ventilation beneath the ground floor—a tight roof with sufficient overlap of slates, and properly guttered—and upon securities against poisoning by foul air—ventilation of the rooms, disconnection of the drains from the interior of the house, and ventilation of the house drains and cess-pit. You should be able to insist, also, that two or more houses should not be drained by one common drain, which you are unable to do at present. I cannot bring my mind to believe the agriculturists of the Island, who, it must be remembered, are not, with very few exceptions, owners, are less anxious to secure the health of their families and of the families of their labourers and country neighbours than other classes are; and I am certain the rate-payers, whether they be farmers or not, wish protection against the burden of the maintenance of unauthorised sewers. Such demands as I have enumerated cannot be regarded as hardships by right-minded and honest builders, indeed, some of this class have told me they would be glad to have proper regulations to work by, and have said the additional expense, if any, would be

Builders.

quite infinitesimal. The speculator and dishonest jerry builder may be alarmed at the prospect of the community at length taking measures to protect themselves. It would be an enormous benefit to the Isle of Wight—where nearly one house in ten was unoccupied in 1881—if their operations were checked. The objections of some owners, who are not land speculators, and their agents to increased powers being obtained for the whole of your District are occult and difficult to understand. If they build houses to live in themselves they nervously see to it every sanitary precaution is taken; and if houses are built for them which other people will occupy it must be to the advantage of their estates that those they employ are controlled by your Authority. Although on certain properties crowded and dilapidated houses exist, it is only right to say some of the labourers' cottages are model dwellings, and notably those which have been built by a distinguished personage to whom the majority of the population have given their confidence. The aim of speculators in building land, who not infrequently may possibly be at the back of the jerry builder, is to get their land sold or let, and any regulation which puts a check upon speculative building operations they necessarily regard as a bar to their interests. Looking both to the present and the future, the sanitary question in the Isle of Wight is, to a considerable extent, more closely a building land question than may at first sight be supposed.

Speculative
builders.

Property owners

Building land
speculators and
owners.

But, if you are able to draw lines about populous places without including agricultural land, can you force men to build within the boundary, say at Freshwater? and if not, can you constantly shift your boundary? I name Freshwater because what was agricultural land there two years ago is now being covered with houses. In my opinion the effect of drawing boundary lines would be to increase the speculative value of land beyond them, and to stimulate activity in creating ground rents which will contribute nothing to the burden which the houses erected will place upon the shoulders of the rate-payers. And this would be opposed to the object which should be constantly before you, that of making the individual do his duty lest the whole community should suffer.

The Legislature by sec. 9 of the Contagious Diseases (Animals) Act. 1886, which re-enacts with alterations the 34th sec. of the Act of 1878, having placed the dairies, cowsheds, and milkshops of your District under your control, it will be the duty of your Medical Officer of Health to advise you on questions arising out of the

Dairies, Cow
sheds, and Milk
shops.

enforcement of the Local Government Board Orders, and the framing and enforcing any regulations you may make under such orders. The Local Government Board at the end of 1886 issued "The Dairies, Cowsheds, and Milkshops Amending Order of 1886," which is the Dairies, Cowsheds, and Milkshops Order of 1885, with the words "Local Government Board" substituted for the words "Privy Council." The provisions of the orders and regulations are enforceable by penalties, and under article 18 of the order of 1885 you may make regulations for the inspection of cattle in dairies, for prescribing and regulating the lighting, cleaning, drainage, and water supply; for the securing the cleanliness of milk stores, milkshops, and of milk vessels containing milk for sale; and for prescribing precautions to be taken by purveyors of milk, and persons selling milk by retail, against infection and contamination.

Bye-laws for
Dairies, Cow-
sheds, and Milk
shops.

The condition of the dairies, cow stables, and milk shops of your District was such, speaking generally, at the end of the year as to render it necessary regulations should be framed as quickly as possible. While these regulations should be widely comprehensive and should provide fully for the attainment of the object in view, the protection of the public health, great discretion on the part of your officers will be necessary in putting them in force. The public health must be protected absolutely, but great injury may be done to an important trade if the attainment of ideal perfection at once be aimed at. I apprehend most difficulty in prescribing the air space for each cow because if too great space be required rather extensive structural alterations will be necessary in nearly all the existing stables, or the number of cows kept must be considerably diminished. The object is pure air, and this will be best secured by the constant admission of fresh air through openings which cannot be closed. Supplies of wholesome water must be insisted upon not only for the animals to drink but for the cleansing of utensils. When the bye-laws for the regulation of dairies, cow stables, and milk shops are circulated a large number of the persons interested will doubtless, provide for meeting their requirements, and pressure will be necessary only in the case of those, of whom there are always a certain proportion, who are as indifferent about the requirements of the law as they are selfishly regardless of the welfare and rights of their neighbours.

Bake-houses.

The bake-houses in your District are not universally so clean and well regulated as they should be. The requirements of secs. 15 and 16 of the Factory and Work-

shop Act, 1883, and secs. 3, 33, 34, and 35 of the Factory and Workshop Act, 1878, should be enforced.

It is most difficult to regulate the work of the In-^{Inspection.} spectors under present conditions. Too little time is given to inspection work, and no attempt can be made at regular systematic from house to house inspection, which alone is of real permanent value. The delay in getting rid of obvious nuisances causes serious loss of time. The Inspectors have to rush about between one meeting of your Authority and another to look at nuisances in certain places, about which they have been ordered to report again, and other parts of their districts must necessarily be neglected. Time is also occupied if legal proceedings are taken in getting notices signed and in serving summonses, which would be better served by some other person as it creates a feeling of additional irritation against the Inspector. Far too much time is spent on the road. An Inspector has often to walk ten or twelve miles before he can commence work, for he cannot always use his tricycle, and after walking home at night jaded and fagged out he is scarcely in a fit condition to commence work early the next day. The sum allowed for travelling expenses is quite inadequate. I would venture to advise you in the interests of the public health that if you are unwilling to provide the Inspectors with the means necessary to enable each to keep a pony you should enter into arrangements which would afford them use of the railways free of cost to them.

Should the powers assigned to District Councils in the Local Government Bill now before Parliament be-<sup>The Local Gov-
ernment Bill.</sup> come law, your sanitary functions will pass to another body, the composition of which in the future, if not at first, will vary little from that of your Board, for its membership will be limited to those who have sufficient leisure and who possess facilities for reaching the place of meeting. This would not be the case to the same extent if the business of the Isle of Wight Rural District were administered by two or more District Councils. From a public health stand-point only, such a division of authority is undesirable as the greater the breadth of view in sanitary matters and the wider the sanitary district which can be efficiently administered the better. So interdependent are the different localities that in sanitary matters, at least, the truest friends of the Isle of Wight are those who regard its interests as a whole, and if new districts are formed it is essential they should be combined for sanitary purposes. Much of the large amount of business which will devolve upon the District Council must necessarily be transacted by sanitary and

other committees. It is possible you may think it advisable to leave the initiation of reforms to the sanitary committee of a District Council, but I do not hesitate to point out to you that by such delay the public welfare would suffer detriment.

In conclusion permit me to say that notwithstanding its great natural advantages both as regards salubrity of climate and beauty of scenery, the material prosperity of the Isle of Wight cannot be assured while sanitary defects, the existence of which is admitted on all sides, are allowed to continue.

I have the honour to be,

Gentlemen,

Your obedient Servant,

J. GROVES.

Carisbrooke.